

NEW SPECIES OF *OCHROTRICHIA* (*OCHROTRICHIA*)
FROM THE SOUTHWESTERN UNITED STATES AND
NORTHERN MÉXICO
(TRICHOPTERA: HYDROPTILIDAE)

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Abstract.—Four new species of *Ochrotrichia*, subgenus *Ochrotrichia*, are described and figured: *Ochrotrichia guadalupensis* (Texas), *O. contrerasi* (Tamaulipas), *O. cieneguilla* (Nuevo León), and *O. yepachica* (Chihuahua). The new species are compared to other closely related congeners.

The genus *Ochrotrichia* is presently divided into two subgenera, *Ochrotrichia* Mosely and *Metrichia* Ross, both of which are limited to the New World. The subgenus *Ochrotrichia* is widely distributed throughout North America, south to northern South America and throughout the islands of the Antilles (Bueno and Santiago, 1992). Marshall (1979) listed 69 species in her review of the Hydroptilidae, but an additional 25 species have been described in the intervening years, primarily from the Neotropical region. The nominate subgenus appears to be especially diverse in the western United States and northern Mexico where 24 species have been recorded. From this region, we describe four additional new species.

Morphological terminology follows that of Marshall (1979). Length is measured from the top of the head to the tip of the forewing, and is given as a range with more than one specimen. Type material is deposited in the National Museum of Natural History, Smithsonian Institution (NMNH), Illinois Natural History Survey (INHS), Universidad Nacional Autónoma de México, (UNAM), University of North Texas (UNT), and in the collections of the authors (SCH, SRM).

***Ochrotrichia guadalupensis* Harris and Moulton, new species**

Fig. 1

Diagnosis: In the shape of the inferior appendages and configuration of the tenth tergum, this species is similar to several species found in the southwestern United States, notably *O. argentea* Flint and Blickle, *O. rothi* Denning and Blickle, and *O. alexanderi* Denning and Blickle. It differs from these species in the banded configuration of processes at the base of the tenth tergum.

Description: Male: Length 3.2–3.6 mm. 27 antennal segments. Brown in alcohol. Abdominal segment VII with short ventromesal process. Segment VIII rectangular in lateral view, rounded posteriorly in dorsal aspect. Segment IX narrowing posteriorly in lateral view, posteroventral margin incised; truncate in ventral view; dorsum deeply incised. Tenth tergum with pair of thin, oblique processes basally, narrowing distally to rounded apex; in lateral view attenuate distally, downturned at apex, lateral

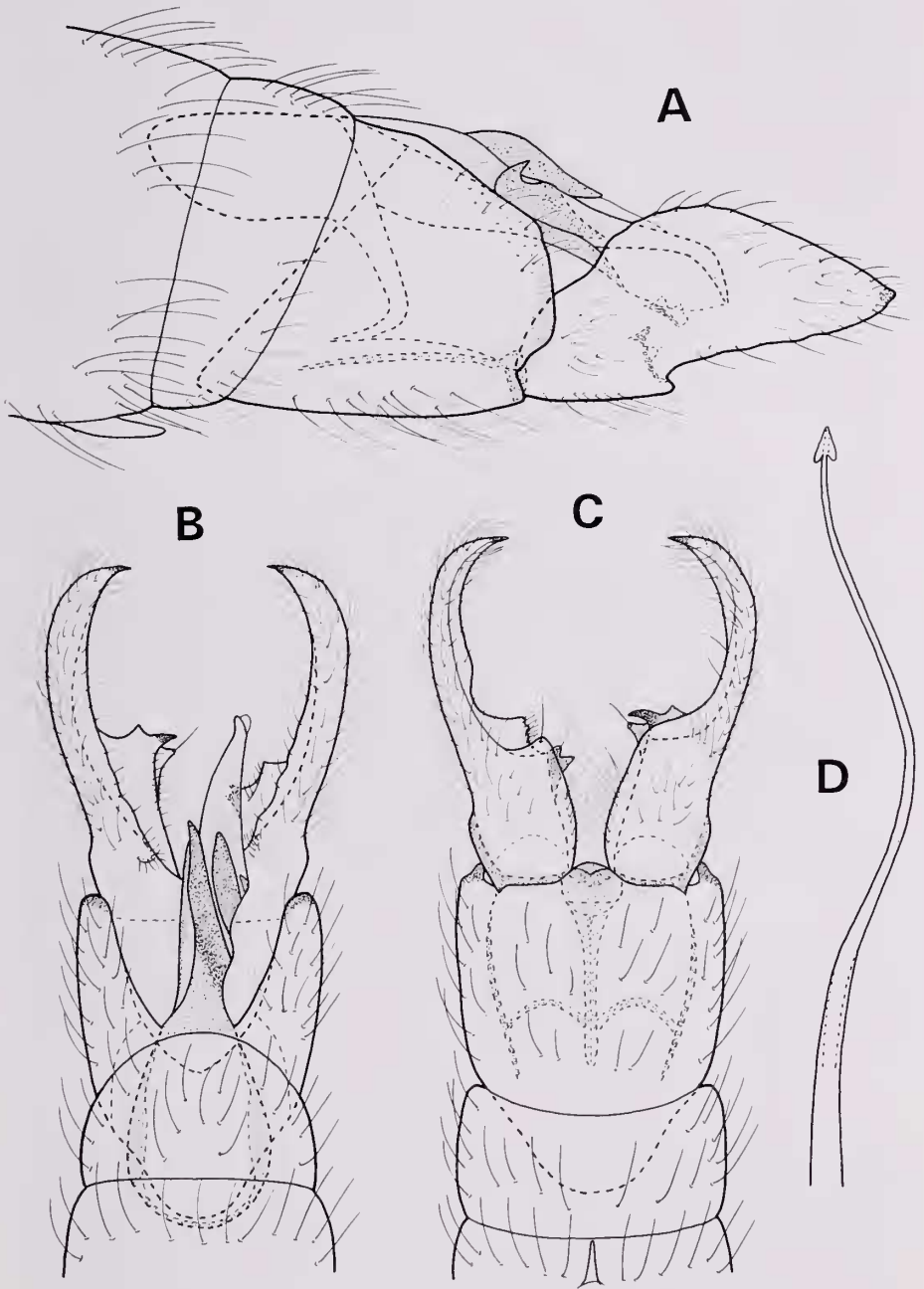


Fig. 1. *Ochrotrichia guadalupensis* n. sp. Male genitalia. A. Lateral view; B. Dorsal view; C. Ventral view; D. Phallus, dorsal view.

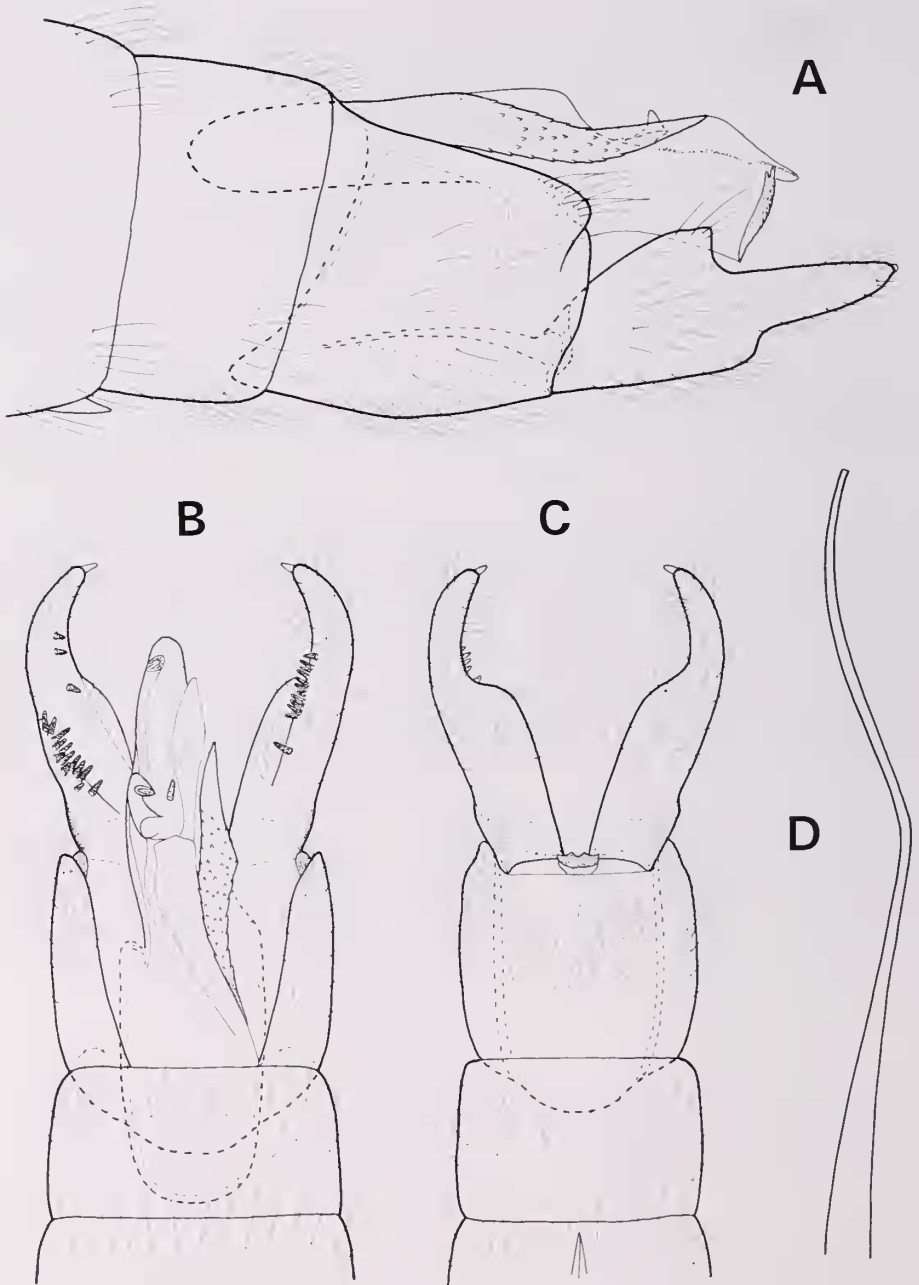


Fig. 2. *Ochrotrichia contrerasi*, n. sp. Male genitalia. A. Lateral view; B. Dorsal view; C. Ventral view; D. Phallus, dorsal view.

process upturned to acute apex at midlength. Inferior appendages in lateral view with small projection on ventrobasal margin, rounded on dorsal margin, attenuate distally; each with acute projections on mesal margins in ventral and dorsal views. Phallus thin and sinuate, triangular apically.

Type material: Holotype; male. United States: Texas, Culberson County, Smith Spring, 2.4 km N Park headquarters, Guadalupe Mountains National Park, 20 May 1991, R. Hood (NMNH). Paratypes: Same data as holotype, 1 ♂ (NMNH); Culberson County, McKittrick Canyon above Pratt cabin, Guadalupe Mountains National Park, 23 May 1991, R. Hood, 3 ♂ (NMNH, INHS, UNT); McKittrick Canyon Creek, Guadalupe Mountains National Park, 14 January 1987, Baumann, Sargent, Kondratieff, 2 ♂ (SCH, SRM).

Etymology: Named for the Guadalupe Mountains of Texas.

Ochrotrichia contrerasi Harris, new species

Fig. 2

Diagnosis: On the basis of the tenth tergum, this species is probably most similar to that of *O. tenanga* (Mosely) and other members of the *lometa* group. The inferior appendages which are incised on both the dorsal and ventral margins, and the elongate lateral process from the tenth tergum are distinctive for *O. contrerasi*.

Description: Male: Length 2.7–2.9 mm. 26 antennal segments. Brown in alcohol. Abdominal segment VII with short ventromesal process. Segment VIII annular. Segment IX rectangular in lateral view; truncate in ventral view; dorsum deeply incised. Tenth tergum with elongate lateral process from inner margin, tapering distally and bearing numerous minute spines, narrow sclerotized band on outer margin with short curved process at midlength, short peg mesally; in lateral view truncate distally with narrow sclerotized band, lateral process attenuate and curving upward, small dorsal process at midlength. Inferior appendages incised near midlength on dorsal and ventral margins; in lateral view, bearing small lobe apically; in ventral view wide basally, narrowing distally and curving inward; in dorsal view, left appendage with row of pegs on mesal ridge, right appendage with numerous pegs basolaterally. Phallus thin and sinuate, truncate apically.

Type material: Holotype; male. México: Tamaulipas, Municipio de Gómez Farias, Río Frio at La Poza Azul, 6 km S. Gómez Farias, 7 August 1988, A. Contreras and A. Moreno (NMNH). Paratypes: Same as holotype, 3 ♂ (NMNH, INHS, UNAM).

Etymology: Named for Atilano Contreras-Ramos who collected the type series.

Ochrotrichia cieneguilla Harris, new species

Fig. 3

Diagnosis: The structure of the inferior appendages places this species in the group containing *O. moselyi* Flint, *O. pectinifera* Flint and *O. arranca* (Mosely). The new species is distinguished by the attenuate dorsal lobe of the inferior appendage which is rounded in the other species of the group.

Description: Male: Length 3.2–3.3 mm. 28 antennal segments. Brown in alcohol. Abdominal segment VII with short ventromesal process. Segment VIII annular. Segment IX rectangular in lateral view, incised dorsally and ventrally on posterior margin; dorsum with posteromesal incision; in ventral view truncate posteriorly,

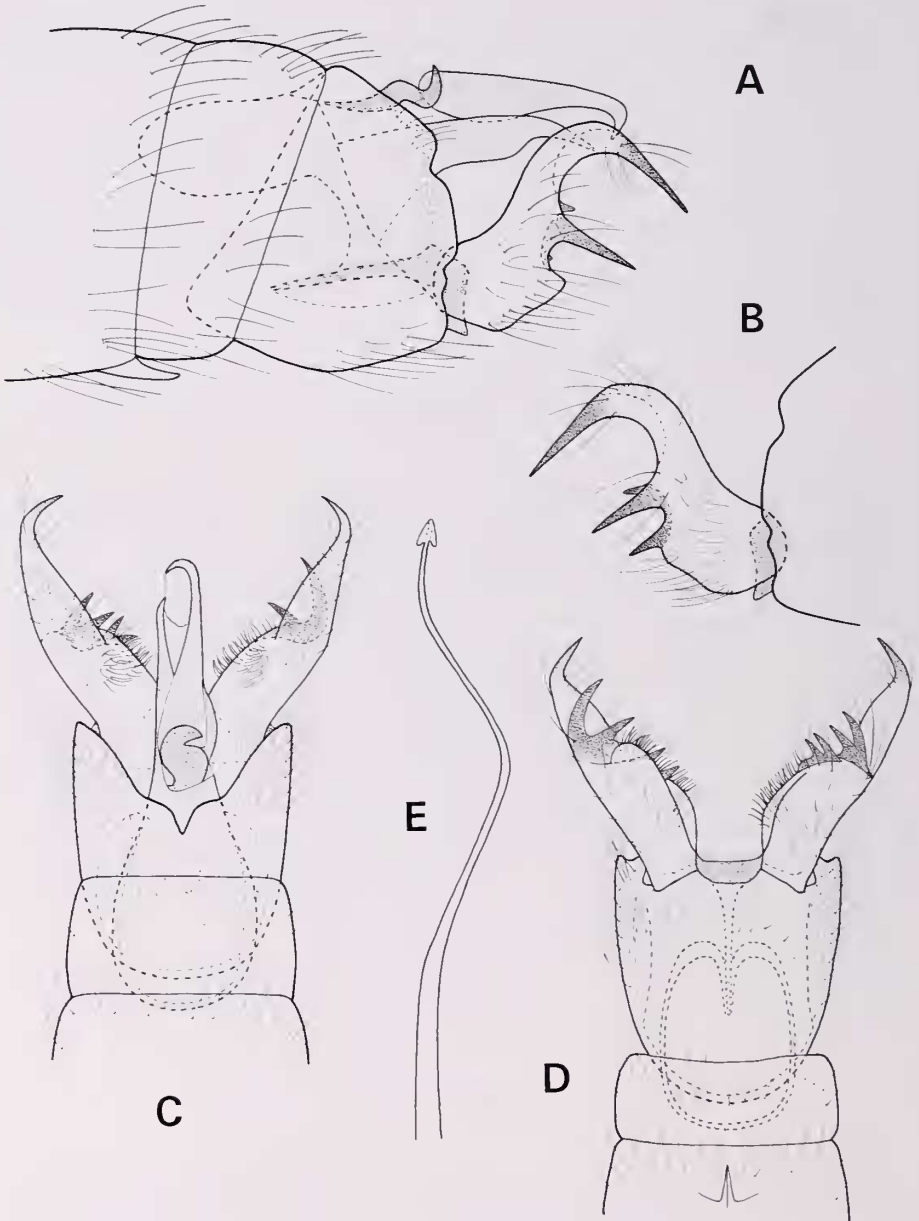


Fig. 3. *Ochrotrichia cieneguilla*, n. sp. Male genitalia. A. Lateral view; B. Right inferior appendage, lateral view; C. Dorsal view; D. Ventral view; E. Phallus, dorsal view.

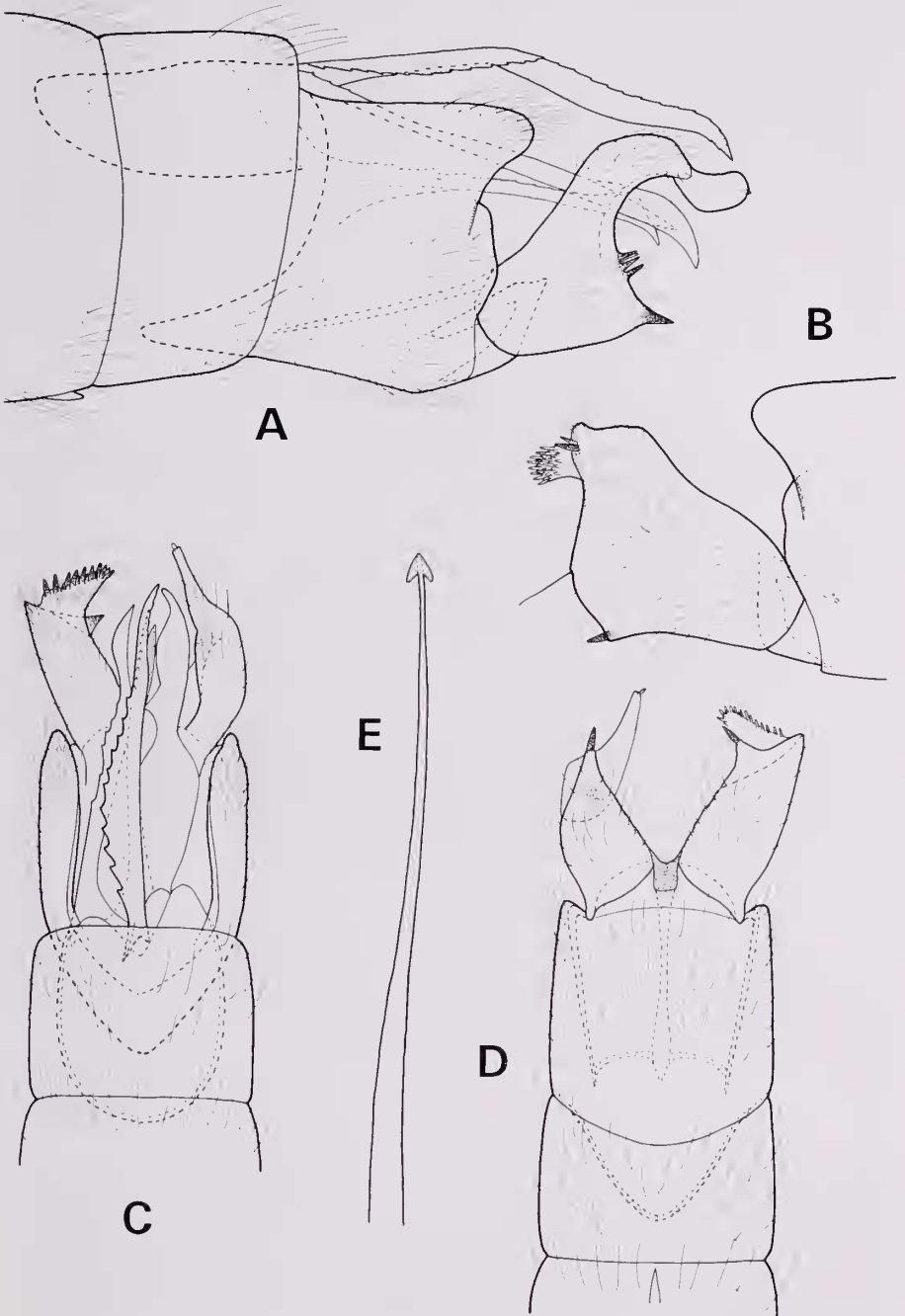


Fig. 4. *Ochrotrichia yepachica*, n. sp. Male genitalia. A. Lateral view; B. Right inferior appendage, lateral view; C. Dorsal view; D. Ventral view; E. Phallus, dorsal view.

lateral margins rounded. Tenth tergum posteriorly divided into two narrow, elongate processes, basally with mesal, hook-like sclerite. Inferior appendages in lateral view narrowing dorsally to elongate sclerotized spine, left appendage with one of the mesal spines elongate, right appendage with two of the mesal spines elongate; in ventral view, right appendage with outer pair of mesal spines longer than inner pair, left appendage with all four spines similar in length. Phallus thin and sinuate, triangular apically.

Type material: Holotype; male. México: Nuevo León, Municipio de Santiago, Cola de Caballo, downstream falls, 3 km SW Cieneguilla, 19 May 1989, S. Harris and A. Contreras (NMNH). Paratypes: Same as holotype, 1 ♂ (NMNH), Rio Blanco, near Aramberri, 10 November 1985, R. Barbra, 1 ♂ (UNAM).

Etymology: Named for the town of Cieneguilla, which is located near Cola de Caballo.

Ochrotrichia yepachica Harris, new species

Fig. 4

Diagnosis: With respect to the inferior appendages, this species is remotely similar to *O. pectinifera* Flint. However, the structure of the tenth tergum with the elongate, serrate mesal process clearly distinguishes *O. yepachica*.

Description: Male: Length 3.1 mm. 24 antennal segments. Brown in alcohol. Abdominal segment VII with short ventromesal process. Segment VIII annular. Segment IX rectangular in lateral view, dorsomesal incision posteriorly; square in ventral view; dorsum deeply incised. Tenth tergum with two elongate mesal processes, serrate dorsal process wide near base, attenuate distally, ventral process thin and tapering distally, right lateral process thin, serrate at midlength, left lateral process wide basally, tapering posteriorly to thin rounded apex; in lateral view dorsal process elongate and narrow, serrate on upper margin, thin, attenuate lateral process projecting ventrad, pair of thin ventral processes which curve downward apically. Inferior appendages asymmetrical; left appendage in lateral view with elongate dorsal lobe bearing stout seta apically, ventral margin produced into heavy spine, series of short spines on posteromesal margin, right appendage triangular in shape, posterodorsally with spinose lobe on inner margin, pair of short spines on outer margin, heavy spine on posteroventral margin; in ventral view, right inferior appendage wide basally, narrowing distally, basal lobe ending in heavy spine, left appendage with dorsal spinose lobe, basally with heavy spine on inner margin. Phallus thin, triangular apically.

Type material: Holotype; male. México: Chihuahua, Río Concheno at Hwy. 16, 12 km SW Yepachic, 25 May 1991, S. Harris and A. Contreras (NMNH).

Etymology: Named for the town of Yepachic which is located near the type locality.

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